

GENTIANA LINEARIS Froel. Rare, except in western Maine. Meadow near railroad in Warren.

Specimens of the above plants have been passed upon by Professor Fernald, and deposited in the herbarium of the New England Botanical Club.

MATINICUS, MAINE.

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HOFFMANN'S FLORA OF BERKSHIRE COUNTY,  
MASSACHUSETTS.

M. L. FERNALD.

It is nearly a century since Chester Dewey published (in 1829) his list of the plants of Berkshire County and, although the region has almost continuously attracted the field-botanist, no serious attempt has been made to replace Dewey's antiquated list. But, now, almost as a centennial reminder of Dewey's work, comes this more ambitious publication.<sup>1</sup> Dewey's list contained about 800, the present 1656 species, varieties and named forms. The new list opens with a preface in which acknowledgment is made to some of the botanists who have aided in the determination of species, and an introduction which contains much of interest. The historical matter is attractively presented and pays special tribute to the genius of Chester Dewey and of Amos Eaton (who, on p. 180, seems to have become confused in the author's mind with the much later and probably unrelated A. A. Eaton). We are told that "In 1824 Eaton went to Troy . . . and in 1827 Dewey took charge of a school in Pittsfield . . . the period of active botanical work on the flora of the County carried on by resident botanists was practically over"; from which it must be inferred that little if any weight has been given the botanical labors of Paul Ansel Chadbourne, long-time president of Williams College, who died in 1883 and whose *Catalogue for Williamstown* contains at least 6 species not included by Hoffmann.

The section on Physiography gives a clear account of the region and closes with what is, from a broad viewpoint, the most important matter, the generalizations. These consist of series of conclusions upon the geographic sources of the Berkshire flora, which, although clearly stated, certainly do not all reflect a clear understanding of simple facts and which can, therefore, only mislead the student who relies upon them. On p. 190 we are told that "The plants in the following groups are those which reach the limits of their ranges in or

<sup>1</sup>Flora of Berkshire County, Massachusetts by Ralph Hoffmann—Proc. Bost. Soc. Nat. Hist. xxxvi. no 5, pp. 171-382. March, 1922.

near Berkshire County. The list is confined to species or well marked varieties whose distribution is well known. The geographical range is based on published records and on an examination of the collections of the New England Botanical Club and the Gray Herbarium."

"(1) Plants that occur in Berkshire County, but have not been found native east of the Connecticut River, ranging northwestward, westward, or southwestward, and in the case of certain calciphiles northeastward (stations in the Connecticut Valley in parentheses)." Then follows the list of 58 species which are reputed to extend only "northwestward, westward, or southwestward" from Berkshire County, with the exception of 4 (*Waldsteinia fragarioides*, *Impatiens pallida*, *Hypericum Ascyron* and *Solidago hispida*) which are admitted as extending as far east as the Connecticut. But surely the "examination of . . . the Gray Herbarium" and the "published records" could not have been very thorough, for of the 58 plants listed as reaching "the limits of their ranges in or near Berkshire County," 3 (*Equisetum variegatum*, *Potamogeton alpinus* and *Viola Selkirkii*) extend more than 1500 miles *northeastward*, quite to Greenland; 10 (*Sparganium fluctuans*, *Potamogeton Friesii*, *Carex eburnea*, *Juncus Dudleyi*, *Populus tacamahacca*, *Salix serissima*, *Arenaria macrophylla*, *Ribes triste* var. *albinervium*, *Viola nephrophylla* and *Solidago hispida*) from 750 to 1100 miles *northeastward*, to Newfoundland or Labrador; 5 (*Sagittaria cuneata*, *Carex Tuckermani*, *Quercus macrocarpa*, *Polygala Senega* and *Impatiens pallida*) 350 to 500 miles *northeastward*, to the Gaspé Peninsula, New Brunswick or Nova Scotia; while 8 (*Carex alopecoidea*, *C. rosea* var. *minor*, *Scirpus Peckii*, *Chenopodium Boscianum*, *Sanicula trifoliata*, *Stachys palustris* var. *homotricha*—including the type collection, *Physalis heterophylla* var. *ambigua* and *Lobelia syphilitica*) reach Maine; 7 (*Pellaea atropurpurea*, *Scirpus lineatus*, *Waldstenia fragarioides*, *Hypericum Ascyron*, *Viola latiuscula*, *Agastache scrophulariaefolia* and *Viburnum affine*) New Hampshire, eastern Massachusetts or eastern Rhode Island; and 6 others (*Carex Davisii*, *C. formosa*, *Morus rubra*, *Cerastium nutans*, *Podophyllum peltatum* and *Veronica virginica*) cross to the eastern side of the Connecticut valley. If we add the species which occur northward in Vermont or beyond, in Quebec, we shall have left of the list of 58 only 2: *Ranunculus circinatus* and *Cirsium Hillii*. Whether the last named is worth counting seems very doubtful. At least, in recent years grave doubt as to its specific value has been raised and in his monograph of the genus Petrak reduces it outright to *C. pumilum*.

The basis of the third group, "Plants that occur in Berkshire County, not found native in Vermont, ranging southward, or southwestward," is as difficult to understand. If the arc had been extended by saying, also southeastward, eastward and northeastward, the perplexity of the discriminating reader would have been removed; for, of the 40 species listed 1 (*Utricularia minor*) extends to Greenland; 4 (*Carex atlantica*, *Juncus militaris*, *Sisyrinchium gramineum*

and *Elatine minima*) to Newfoundland; 3 (*Carex albolutescens* var. *cumulata*, *Smilax rotundifolia* and *Potentilla pumila*<sup>1</sup>) to the Maritime Provinces; 7 (*Carex laxiculmis*, *Quercus coccinea*, *Polygonum tenue*, *Rubus Enslenii*, *Linum virginianum*, *Clethra alnifolia* and *Lycopus virginicus*) to Maine; and 15 (*Juniperus communis*, *Digitaria filiformis*, *Panicum umbrosum*, *Carex seorsa*, *C. tetanica*, *Orontium aquaticum*, *Hypoxis hirsuta*, *Silene pennsylvanica*, *Vitis aestivalis*, *Rhododendron nudiflorum*, *Vaccinium stamineum*, *Gentiana Andrewsii*, *Cuscuta arvensis*, *Prenanthes Serpentaria* and *Solidago speciosa*) to southeastern New Hampshire or eastern Massachusetts.

This type of easy-going and unscholarly generalization is all too common, but of what value can it possibly be? Incidentally, the insertion of such ill-founded matter casts an unnecessary doubt upon the validity of otherwise admirable work. For the *Flora* itself is one upon which reliance can largely be placed. It is the result of long and untiring field-work and methodical organization of data, and the author has had the collaboration of many competent botanists. It is concisely and definitely presented, although one familiar with the literature would be gratified to know what disposition has been made of species heretofore recorded from Berkshire but not clearly accounted for by Hoffmann; such plants, for instance, of Chadbourne's *Catalogue for Williamstown* as *Carex vestita* (vouched for by Dewey), *Pogonia pendula* (*P. trianthophora*), a wholly unique species which Chadbourne could not have mistaken and which is well known at modern stations close to Berkshire County (southern Windham Co., Vermont, western Franklin County, Massachusetts, and northern Litchfield County, Connecticut) or *Juglans nigra*, the Black Walnut, which others besides Chadbourne have credited to Berkshire Co. Students of our flora may also with good reason ask why Chadbourne's other records, which would greatly extend the local ranges, are ignored; stations for such distinct plants as *Thalictrum anemonoides* (*Anemonella*) at Williamstown (still perfectly well known from just over the line in Vermont), *Asclepias quadrifolia* or *Pentstemon pubescens* (*P. hirsutus*).

Seventeen names or combinations are published as new and the indexers will highly commend the author's wisdom in giving at the end a special enumeration of these. Not all are likely to be taken up, however, for they or earlier valid names already existed. For instance, *Polypodium vulgare*, forma *auritum* (Willd.) dates back to Milde, *Gefäss-Crypt.* Schles. 632 (1858); *Phalaris arundinacea*, forma *picta* (L.) goes back to Aschers. & Graebn. *Synop.* ii. 24 (1898) and is antedated by the identical forma *variegata* (Parnell) Druce, *Fl. Berks.* 558 (1897); *Aster novae-angliae*, forma *rosea* was published by Britton, *Proc. Nat. Sci. Assoc. Staten I.* ii. Nov. 8 (1890).

<sup>1</sup> Represented for fourteen years in the herbarium of the New England Botanical Club by characteristic and correctly identified Vermont material.

The keys which have been copied or compiled chiefly from other sources add to the usefulness of the work, but in some cases more intelligent copying would have made them more useful. For example, on p. 201, a bit of key extracted from RHODORA, xvii. 127, aims to show the distinctions between two varieties of *Lycopodium annotinum* but, unfortunately, the wrong lines were copied so that they can only lead the user astray.

The local pride and perhaps lack of broader experience which leads the compiler of practically every local list to feel that his region "contains a large proportion of plants that reach the limits of their ranges within or very near its borders," is probably responsible for the long list already enumerated which the author erroneously supposes to limit their northeastern extensions in Berkshire County. The same psychological phenomenon is doubtless responsible for the statement under *Potamogeton confervoides* that Guilder Pond is "The only locality in the State for this local Pondweed," and under *Orontium* that Big Pond in Otis is "The most northern station for this plant of the coastal plain." A little search would have revealed much material of *Potamogeton confervoides* and many records from Robbins's classical station at Chockalog (or Shockalog) Pond in Uxbridge whence it has been known since 1844 and that Tuckerman's station for *P. Tuckermani* (synonym of the earlier-published *P. confervoides*) was in Tewksbury, Middlesex County; while N. A. Cobb's long-known (and published) station for *Orontium* in Slow Brook, Northampton, is surely more northerly than Big Pond.

The Appendix contains a long list of Fugitive Species and another of Excluded Species. In the latter are many entries from Dewey's original list, which must have gone into the discard through failure to understand the usage of Dewey's time. Thus *Festuca fluitans*, *Elymus glaucifolius* and *Vicia sativa*, like many others, are excluded because these names do not cover in the 7th edition of Gray's Manual plants of Berkshire County; but surely the *Festuca fluitans* or *Glyceria fluitans* of early New England botanists and of the first six editions of the Manual was either *G. borealis* or *G. septentrionalis*, species first differentiated from the Old World *G. fluitans* in 1897 and 1906 respectively. *Vicia sativa* of American manuals up to the 7th edition of Gray's Manual was, of course, *V. angustifolia*, var. *segetalis*; and *Elymus glaucifolius* is identical with *E. canadensis*. All these plants appear in the Flora under their now accepted names; but such names of Dewey's as *Eriophorum cespitosum* (synonym of the European *E. vaginatum* but applied by Dewey to *E. callitrix*), *Sagittaria sagittifolia* (the Old World species with which the American *S. latifolia* was formerly confused), *Eriocaulon gnaphalodes* (the name long used for the southern *E. compressum* with which Dewey confused our *E. septangulare*), *Trientalis europaea* (the Old World species with which early New England botanists identified our *T. borealis*) and *Anemone nemorosa* (the European species with which our *A. quinquefolia* was

long confused) are not found in the list of excluded species. If Dewey's *Festuca fluitans*, *Vicia sativa*, etc., are excluded why not the perfectly parallel *Eriophorum cespitosum*, *Sagittaria sagittifolia*, etc.?

It may be thought by some that a reviewer should overlook these and other weaknesses in the new *Flora of Berkshire County* and enlarge upon its accuracy. The latter quality, naturally, is what we have a right to expect from an author who has had unusual opportunities; and the degree to which it is attained can be determined only after prolonged use of the publication. But the very patent departures from accuracy and consistency, unfortunately, stand out prominently upon first examination and it is equally unfortunate that they reflect a tendency of many who feel themselves competent to publish upon geographic distribution,—the failure to realize that exact facts (on the whole easily ascertained) are alone of real and lasting value.

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## A NEW ENGLAND OCCURRENCE OF *LISTERA AUSTRALIS*.

H. W. CHILD.

IT gives me keen satisfaction to announce through *RHODORA* the finding, for the first time in New England, of *Listera australis*. The facts are these: In July 1921, Cyrus Pringle Horsford of Charlotte, Vermont, sent me a plant for identification. While the specimen reached me in poor condition, it was clearly a *Listera*, although certainly not *L. auriculata* or *L. convallarioides*. It seemed to me an unusual form of *L. cordata*.

On May 29th, 30th, and 31st, 1922, Mr. Lownes of Providence, R. I., Mr. Schweinfurth of Chestnut Hill, Mass., and I went to Vermont to find *Calypso bulbosa* and *Cypripedium arietinum*, it being the eighth year I have visited Vermont successfully for that purpose. Mr. Horsford went with us to the various places explored and, in fact, he located most of the plants for us. In Monkton, we found *Listera cordata* in full flower and Mr. Horsford at once said that the plant he had found in July 1921 was not the same species.

On July 29th, 30th and 31st, 1922, I was again in Vermont and at the suggestion of Mr. Horsford visited several most interesting localities, which proved very fruitful. On July 30th, we went to a bog to find some orchids which he knew were to be found there in great abundance. While I was preparing photographs of some of them, he said he would look around. In a short time he came to me with